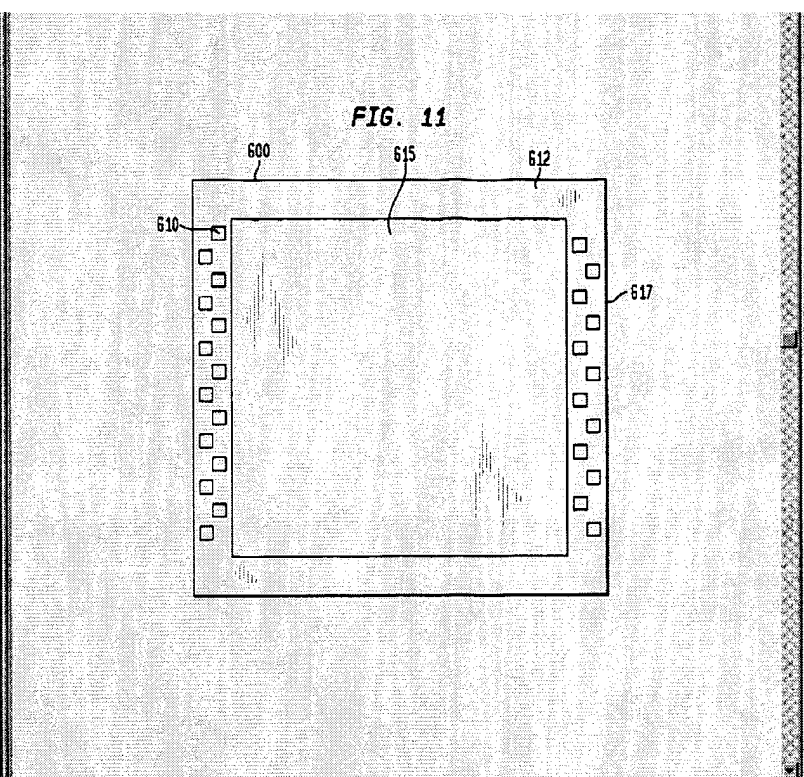


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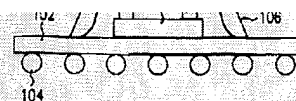


FIG. 1a
(PRIOR ART)

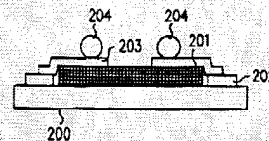


FIG. 1b
(PRIOR ART)

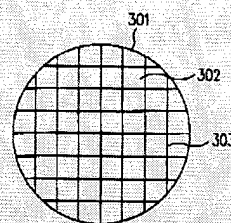


FIG. 2

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38				28

[75] Inventor: Patrick K. Thompson, Mass. Atty.

[73] Assignee: Motorola, Inc., Schaumburg, Ill.

[21] Appl. No.: 619,401

[22] Filed: Mar. 21, 1996

[51] Int. Cl.⁶: H01L 23/48; H01L 23/12; H01L 23/14; H01L 23/32

[52] U.S. Cl.: 257/400; 257/700; 257/750; 257/777; 257/680; 257/690; 257/650

[58] Field of Search: 257/400, 700-703, 783, 792, 668, 669-696, 711, 777, 778, 782

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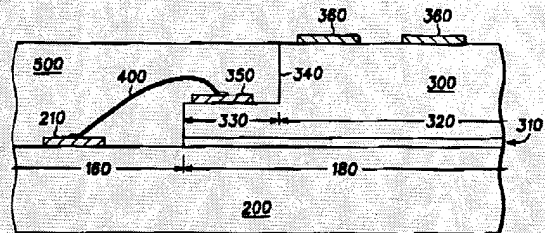
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Primary Examiner—Tom Thomas
Assistant Examiner—Alexander Oscar Williams
Attorney, Agent, or Firm—Rogers William Dwyer

ABSTRACT

A method of forming an integrated circuit assembly having a stepped interposer (300), an integrated circuit die (200) and an encapsulant (380). The stepped interposer (300) includes a central portion (320) having a plurality of contact regions (340), and a peripheral region (330), completely surrounding the central region (320), having a plurality of bonding regions (360). Some of the contact regions (340) are electrically coupled to some of the bonding regions (360). The integrated circuit die (200) includes a plurality of bonding pads (210) located around its periphery. The stepped interposer (300) is fixedly coupled to the integrated circuit die (200) and some of the bonding pads (210) are electrically coupled to some of the bonding regions (360). The stepped interposer (300) of the present invention provides contact regions (340) free from encapsulant (380) and added protection for wirebonds (400) or any other means of electrical coupling.

16 Claims, 5 Drawing Sheets



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37	US 5148265 A	USPAT	19920915	28

FIG. 8C

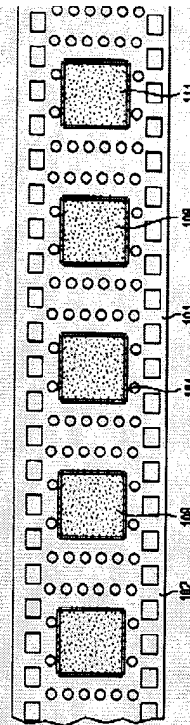
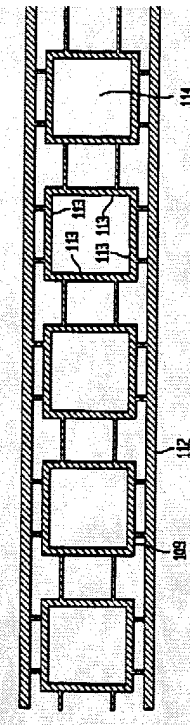


FIG. 8D



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